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Case No.: 54664US002

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

First Named Inventor: WEISKOPF ALBRECHT, BONNIE
Application No.: 09/325963 Group Art Unit: 1771
Filed: June 4, 1999 Examiner: Chang, Victor S.
Title: BREATHABLE POLYMER FOAMS

BRIEF ON APPEAL

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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<u>July 14, 2005</u>	<u>Judy Knutson</u>
Date	Signed by: Judy Knutson

Dear Sir:

This is an appeal from the Office Action mailed on December 13, 2004, finally rejecting claims 29-33 and 36. A Notice of Appeal in this application transmitted by facsimile to the USPTO on March 14, 2005. A Petition for a two-month extension of the time for filing an Appeal Brief is submitted herewith. The fee required under 37 CFR § 41.20(b)(2) for filing an appeal brief should be charged to Deposit Account No. 13-3723.

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REAL PARTY IN INTEREST

The real party in interest is 3M Company (formerly known as Minnesota Mining and Manufacturing Company) of St. Paul, Minnesota and its affiliate 3M Innovative Properties Company of St. Paul, Minnesota.

RELATED APPEALS AND INTERFERENCES

Appellants are unaware of any related appeals or interferences.

STATUS OF CLAIMS

Claims 1-12, 18-24, 29-33, and 36 are pending in the application. Claims 1-12 and 18-24 have been withdrawn from consideration. Claims 29-33 and 36 stand rejected.

STATUS OF AMENDMENTS

No amendments have been filed after the final rejection.

SUMMARY OF CLAIMED SUBJECT MATTER

The present invention features breathable polymer foam articles that can be used in a variety of products, including filtration products, sponges, receptive ink layers, and medical products. The articles of the invention have a three layer ABA or ABC structure, wherein the B layer is an inner core layer that has a thickness of about 86 to about 265 microns and comprises a breathable thermoplastic foam. This inner core layer comprises at least one ruptured foam cell and has breathability in a direction perpendicular to a major surface of the foam. The articles of the invention also comprise at least two outer skin layers that are melt-bonded to the inner core layer. Each of the outer skin layers comprise an unfoamed, polymeric material selected from the group consisting of amorphous or non-amorphous thermoplastic materials, elastomers, thermoplastic elastomers, and semi-crystalline polymers.

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GROUND OF REJECTION TO BE REVIEWED ON APPEAL

Claims 29-33 and 36 stand rejected under 35 USC § 103(a) as purportedly unpatentable over the combined teachings of Lindquist (U.S. Patent No. 3,665,918) in view of Watson (U.S. Patent No. 3,862,282). This was the only ground of rejection maintained by the Examiner in the final Office Action dated December 13, 2004.

ARGUMENT

Claims 29-31 and 36 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Lindquist (U.S. Patent No. 3,665,918) in view of Watson (U.S. Patent No. 3,862,282). The Examiner asserts the combination of these two references renders the claimed invention obvious. Applicants disagree, and respectfully request reversal of the final rejection of the above claims.

In order to establish a *prima facie* case of obviousness, the Patent Office must demonstrate that (1) there is a suggestion or motivation in the prior art to modify or combine reference teachings, (2) one skilled in the art would have had a reasonable expectation of success in making the modification or combination, and (3) the prior art reference(s) disclose all of the claim limitations. The fact that one of ordinary skill in the art would have had the capability to modify the method disclosed in the prior art reference(s) is not sufficient. MPEP 2143.01. The prior art reference(s) must provide a motivation or reason for making the changes. MPEP 2142; *Ex parte Chicago Rawhide Manufacturing Co.*, 226 USPQ 438 (PTO Bd. App. 1984).

Independent claim 29 is directed to an article having a three-layer structure comprising a core foam layer and two outer skin layers, wherein the core layer comprises a breathable thermoplastic foam and the skin layers are melt-bonded to the core foam layer. Lindquist, the primary reference relied on by the Examiner, describes a sheet of polyurethane foam having a pressure sensitive adhesive coating on at least a portion of

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one side thereof (col. 2, lines 17-19). Although the Examiner had previously acknowledged that Lindquist does not disclose an ABA structure (see Office Action dated November 6, 2002, Paper No. 14, p. 10), the Examiner asserts that Lindquist does teach that a porous plastic backing film may be applied to the opposite side of the foam, and thus generally discloses a three-layer structure, as is recited in the present claims. However, the current version of claim 29 recites that the skin layers are melt-bonded to the core foam layer. This may be accomplished for example, by coextrusion of the layers. There is nothing in Lindquist that teaches or suggests or provides any motivation for a foam substrate having two outer skin layers comprising a thermoplastic material, elastomer, or semi-crystalline polymer, wherein the outer layers are co-extruded with or otherwise melt-bonded to the inner foam core. As explained on page 3 of the specification, "melt-bonded means adhering adjacent layers by bringing them into contact while both are in a molten state, e.g. by extrusion." The Lindquist patent merely describes coating the adhesive onto the foam (see col. 5, lines 50-58); it does not describe, for example, co-extrusion of the outer layers with the foam core. This reference, therefore, fails to teach or suggest all the limitations recited in independent claim 29.

The Watson reference does not compensate for the deficiencies of Lindquist. Watson describes a process for modifying polyurethane foams to achieve a reticulated foam structure. The process involves applying a hydrodynamic force to at least one surface of the foam sheet. The force applied is of sufficient magnitude to rupture substantially all of the cellular membranes of the foam without destroying the skeletal structure of the foam. The Examiner asserts that Watson thus describes a foam having "at least one ruptured foam cell" as is recited in claim 29. However, as with Lindquist, Watson fails to describe outer skin layers that are melt-bonded, e.g. co-extruded, to the foam sheet. In fact, Watson fails to describe three-layer structures at all. Thus, Watson fails to provide all of the elements that are missing from Lindquist. Consequently, these references, even in combination, fail to teach or suggest all of the limitations recited in independent claim 29, and thus do not render the claimed invention obvious. Since

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claims 30-33 and 36 all are dependent on claim 29, these claims are likewise patentable over the cited references for substantially the same reasons as claim 29. Applicants, therefore, assert that the final rejection of claims 29-33 and 36 under 35 USC § 103(a) should be reversed.

CONCLUSION

For the foregoing reasons, appellants respectfully submit that the Examiner has erred in rejecting this application, and request reversal of the final rejection of claims 29-33 and 36.

Respectfully submitted,

July 14, 2005
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CLAIMS APPENDIX

29. An article comprising a breathable three layer ABA or ABC structure, said article comprising:
- (a) an inner core layer having a thickness of about 86 to about 265 microns, said inner core layer comprising a breathable thermoplastic foam having at least one major surface and at least one ruptured foam cell, wherein the inner core layer has breathability in a direction perpendicular to a major surface of the foam, and
 - (b) two outer skin layers that are melt-bonded to the inner core layer, wherein each of the outer skin layers comprise an unfoamed, polymeric material selected from the group consisting of amorphous or non-amorphous thermoplastic materials, elastomers, thermoplastic elastomers, and semi-crystalline polymers.
30. The article of claim 29 wherein the B layer is a thermoplastic elastomer.
31. The article of claim 29 having a moisture vapor transmission rate greater than 300 grams per square meter per 24 hours.
32. The article of claim 29 further comprising a pressure sensitive adhesive layer affixed to a major surface of at least one outer skin layer.
33. The article of claim 29 further comprising a material laminated to at least one outer skin layer.
36. The article of claim 29, wherein the foam cell was ruptured by stretching the article.

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EVIDENCE APPENDIX

None.

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RELATED PROCEEDINGS APPENDIX

None.